

Abstract of the Disclosure

Semiconductor device manufacturing equipment having multiple chambers, including at least one process chamber, provides multiple seals between the chambers so that a semiconductor manufacturing process can continue even when a leak occurs at one of the seals. In addition to the process chamber(s), the semiconductor manufacturing equipment includes a load-lock chamber, a transfer chamber having a robot by which a wafer in the load-lock chamber is transferred to a process chamber, a respective gate by which the chambers of each adjacent pair are connected, and a gate valve disposed in each gate. The gate defines a plurality of doorways leading into the adjoining chambers. The gate valve has a plurality of doors that can be concurrently positioned over the doorways, respectively, to establish a plurality of seals between one chamber and the chamber connected thereto by the gate.